

REMARKS

The application has been carefully reviewed in light of the Office Action dated November 22, 2004. Claims 25, 32, 36 and 43 have been amended. Claims 1-24, 31 and 42 have been canceled. Claims 25-30, 32-41 and 43-46 remain pending in this application. The foregoing amendment neither raises the issues of new matter, nor new issues, and should be admitted due to the showing of good and sufficient reasons necessitating the amendment stated below. Applicants reserve the right to pursue the original claims and/or any canceled claims in this application and in other applications.

Claims 1-4, 9-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. (WO 99/64243) in view of Sugiura et al. (U.S. Patent No. 5,323,176). Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. and Sugiura et al. as applied in Claim 1, in view of Chiang et al. (U.S. Patent No. 6,451,438). Claims 5 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. and Sugiura et al. as applied in Claim 1, in view of Masuda et al. (U.S. Patent No. 5,475,473). Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. and Sugiura et al. as applied in Claim 1, in view of Till et al. (U.S. Patent No. 6,006,059). Applicants respectfully traverse the rejection since claims 1-24 have been canceled.

Claims 25, 28-32, 36 and 39-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. Claim 25 has been amended to incorporate the subject matter of claim 31. Claim 36 has been amended to incorporate the subject matter of claim 42. Applicants respectfully traverse the rejection and request reconsideration.

Claim 25 recites a metering device for providing a layer of coating liquid to a coating apparatus wherein the coating apparatus has a rotatable first roll and a rotatable second roll

defining with the first roll a first nip through which a printing substrate passes, comprising inter alia "a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll, wherein the surface energy of a portion of the distal edge adjacent the first end of the doctor blade and a portion of the distal edge adjacent the second end of the doctor blade have a surface energy that is less than the surface energy of the coating liquid."

Claim 36 recites a metering device for providing a layer of coating liquid to a coating apparatus wherein the coating apparatus has a rotatable first roll and a rotatable second roll defining with the first roll a first nip through which a printing substrate passes, comprising:

- a. a rotatable third roll having a surface energy;
- b. a supply of coating liquid having a surface energy, the supply of coating liquid being in contact with the third roll; and
- c. a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll,
wherein the surface energy of a portion of the surface of the third roll adjacent the first end thereof and a portion of the third roll adjacent the second end thereof have a surface energy that is less than the surface energy of the coating liquid.

The support for amended claims 25 and 36 are found throughout the specification and at least at pages 20 and 21.

Sanderson discloses that an ink jet printer (10) is provided comprising a housing (30), an ink jet printing apparatus (20) and a coating apparatus (60). The ink jet printing apparatus (20) is located within the housing (30) and includes an ink jet printing device (22) capable of ejecting ink droplets onto a first side of a printing substrate (12) which moves through the housing (30) along a printing substrate feed path. The coating apparatus is positioned along the printing

substrate feed path and spaced from the printing device (22). The coating apparatus (60) applies a substantially uniform layer of coating material onto at least a portion of the first side of the printing substrate (12). See Sanderson, Abstract.

The Office Action fails to establish a *prima facie* case of obviousness for the subject matter of claims 25, 28-31, 36 and 39-43. Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in art, to modify the reference or combine the references teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. See e.g., *In re Dembiczaik*, 175 F.3d 994 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996). The references used in the Office Action fail at least the third prong of obviousness in that the combination of cited references fails to teach or suggest all claim limitations

In the present case, Sanderson fails to teach or suggest the subject matter of claim 25, “a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll, wherein the surface energy of a portion of the distal edge adjacent the first end of the doctor blade and a portion of the distal edge adjacent the second end of the doctor blade have a surface energy that is less than the surface energy of the coating liquid.” Sanderson also fails to teach or suggest the subject matter of claim 36, a rotatable third roll having a surface energy, a supply of coating liquid having a surface energy, the supply of coating liquid being in contact with the third roll and a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll, “wherein the surface energy of a portion of the

surface of the third roll adjacent the first end thereof and a portion of the third roll adjacent the second end thereof have a surface energy that is less than the surface energy of the coating liquid.”

The Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to design the surface energy of the third roll and at least the distal edge of the doctor blade to be less than the surface energy of the coating liquid in order to sufficiently spread the liquid to form a substantially uniform layer of coating material based on the disclosure of Sanderson. Sanderson discloses that “[p]referably, the second roll 64 is formed from a material having a surface energy which allows the liquid coating material to sufficiently spread out on its outer surface 64a such that a substantially uniform layer of coating material 100 is applied by the second roll 64 to the substrate 12.” See Sanderson, page 5, lines 17-20.

However, the claimed interaction between the coating liquid and a portion of the distal edge of the doctor blade (claim 25) and a portion of the surface of the third roll (claim 36) has the opposite effect of the interaction purported by Sanderson. Neither claim 25 nor claim 36 are directed to providing a substantially uniform layer of coating material on a portion of the distal edge or a portion of the third roll. Instead, those claims are directed to creating a non-uniform layer of coating liquid by providing areas where the surface energy of the roll or doctor blade is less than the surface energy of the coating liquid. Thus, the Examiner’s assertion regarding the obviousness of using a third roll and distal edge of a doctor blade having a surface energy that is less than the surface energy of the coating liquid in order to sufficiently spread the liquid to form a substantially uniform layer of coating material is not applicable to claims 25 and 36.

Assuming *arguendo* that Sanderson may disclose a material having a surface energy which allows the liquid coating material to sufficiently spread out on its outer surface implying a

material having a surface energy that is higher than the surface energy of the coating liquid, claim 25 recites a material on a portion of the distal edge having a surface energy that is less than the surface energy of the coating liquid. Claim 36 recites a material on a portion of the surface of the third roll having a surface energy that is less than the surface energy of the coating liquid. Therefore, instead of providing a coating liquid having a lower surface energy as compared with the material contacted to cause even spreading of the coating liquid, the devices of claims 25 and 36 provide a coating liquid having a higher surface energy as compared with the material contacted, which would cause the liquid to tend to bead up and not spread evenly, for example, to reduce capillary wicking adjacent the edges of the rolls. See Applicants' specification.

Thus, even assuming *arguendo* that Sanderson may disclose using a roll having a surface energy which allows the liquid coating material to sufficiently spread out on its outer surface to form a substantially uniform layer of coating material, the limitations recited above with respect to claims 25 and 36 are not obvious in light of the disclosure in Sanderson. Therefore, applicants respectfully request that the rejection of claims 25 and 36 be withdrawn.

Claims 28-30 depend from claim 25. Claims 39-41 depend from claim 36. Claims 28-30 and 39-41 are allowable along with claims 25 and 36, respectively, for at least the reason that they depend from allowable independent claims 25 and 36.

Claims 26, 27, 37, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. as applied in Claims 25 and 36 above, in view of Till et al. (U.S. Patent No. 6,006,059). Applicants respectfully traverse the rejection and request reconsideration.

Claims 26 and 27 depend from claim 25. Claims 37 and 38 depend from claim 36. Claims 26, 27, 37 and 38 are allowable over Sanderson along with claims 25 and 36, respectively, for at least the reason that they depend from allowable independent claims 25 and

36. The combination of Sanderson with Till also fails to teach or suggest the subject matter of claims 25 and 36. Therefore, the rejection of claims 26, 27, 37 and 38 should be withdrawn because they depend from allowable independent claims 25 and 36, respectively.

Claims 33 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25, in view of Hanson et al. (U.S. Patent No. 4,909,182). Applicants respectfully traverse the rejection and request reconsideration. Claim 33 depends from claim 25. Claim 44 depends from claim 36. Claims 33 and 44 are allowable over Sanderson along with claims 25 and 36, respectively, for at least the reason that they depend from allowable independent claims 25 and 36. Therefore, the rejection of claims 33 and 44 should be withdrawn.

Claims 34 and 45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25, in view of Okuda et al. (U.S. Patent No. 5,671,675). Applicants respectfully traverse the rejection and request reconsideration.

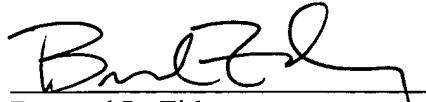
Claim 34 depends from claim 25. Claim 45 depends from claim 36. Claims 34 and 45 are allowable over Sanderson along with claims 25 and 36, respectively, for at least the reason that they depend from allowable independent claims 25 and 36. The combination of Sanderson with Hanson also fails to teach or suggest the subject matter of claims 25 and 36. Therefore, the rejection of claims 34 and 45 should be withdrawn because they depend from allowable independent claims 25 and 36, respectively.

Claims 35 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sanderson et al. as applied in Claim 25, in view of Illman et al. (U.S. Patent No. 3,990,132). Applicants respectfully traverse the rejection and request reconsideration.

Claim 35 depends from claim 25. Claim 46 depends from claim 36. Claims 35 and 46 are allowable over Sanderson along with claims 25 and 36, respectively, for at least the reason that they depend from allowable independent claims 25 and 36. The combination of Sanderson with Illman also fails to teach or suggest the subject matter of claims 25 and 36. Therefore, the rejection of claims 35 and 46 should be withdrawn because they depend from allowable independent claims 25 and 36, respectively.

In view of the foregoing, the present patent application is now deemed to be in condition for allowance. Applicants therefore respectfully request formal allowance of the application. If the Examiner believes further discussion of any issue would expedite allowance, the Examiner is encouraged to telephone Applicants' undersigned representative.

Respectfully submitted,
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